					MULTI	SPECIES	CONSI	ERVAT	ION ST	RATEG	GY MILE	ESTONE	98 ROLLI	ED UF	P SUMMARY		
feasi steel wate majo	bility head rshe r low San	stu d mig d ar /-ele Joao	98 Initiate a dy of restoring gration into upper eas (e.g., upstream of evation dams) in at least quin River Basin EMZ			PROJECTS REVIEWED - AFRP-02-02, AFRP-02-03, ERP-98-N02		restoring s major low- Tributary. dams on a Investigatii Huffman D has been H been delay intended te implement Goodwin D Determina	teelhead mi elevation da One ERP C I landscape l on of Reintry Dam on the M nampered by yed. Access o develop a ation of prio Dam. Data ii	gration into u Imms) in at lease contract evalue level. One con- oduction of An- verced River. y access prob- s options are le consensus ba- ritized restorar- s being analy- her this reach-	pper waters st one San lates opport ontract fund- nadromous . This proje blems to the being explo ased plan to ation/resear- rzed and pla	targeted river red. The other A	upstream of asin EMZ assage above t A Feasibility ve Crocker- s milestone, but aach and has AFRP project is term aus River below inues.			AGENCY NOTES	NOTES CONT'D
			MULTI SPECIE	S CONSERV	ATION STRATEG	Y MILESTO			LUATI		INDIVI		OJECTS RE		VED TO FORMULATE T	HE ROLLED UP SUM	MARY
MS Number	REGION	Project Type	Milestone	ERP Targets taken from ERPP Vol 2	MS Components or Questions for field personnel	ERP PROJECT NUMBERS	CONT START DATE	END DATE	CALFED	Cost Share	Total Project Cost	Applicant	Principal Investigator	Quantifiable Units	Project Name	Comm	ents
	sJR I		Initiate a feasibility study of restoring steelhead migration into upper watershed areas (e.g., upstream of major low- elevation dams) in at least one San Joaquin River Basin EMZ Tributary.		98 A. Status of Initiating a feasibility study of restoring steelhead migration into upper watershed areas (e.g., upstream of major low- elevation dams) in the Stanislaus River Ecological Management Unit				, ward		0001		JD Wikert		Develop a Consensus Based Plan to Direct the Long Term Implementation of Prioritized Restoration/Research in the Stanislaus River Below Goodwin Dam	Objective: Develop a consensus bi implementation of prioritized restor River below Goodwin Dam. The p finishing a summary of the existin will be provided to the Stanislau and comment in January 200 Restoration Plan and	ased plan to direct the long term ation/research in the Stanislaus roject is currently focused on g fisheries data. The summary s River Fish Group for review 4. Work continues on the
98	sJR SJR	SR SR			98 A. Status of Initiating a feasibility study of restoring steelhead migration into upper watershed areas (e.g., upstream of major low- elevation dams) in the Stanislaus River Ecological Management Unit	AFRP-02-02	Oct-98	Mar-00	49.000	71.000	120.000	AFRP Institute for Fisheries Resources (IFR)	USFWS Dr. Guy D. Phillips		Expanding California Salmon Habitat to Alter Dams and Diversions	The project has five basic features: 1 financing of the opportunity for acqui from willing sellers, (2) identify car develop a template for analysis and public and agencies for all potential mechanism to acquire dams from community and peer review workshc all EMZs. <i>William F. "Zeke" Gr Resources.</i>	sition/modification of private dan didate Central Valley sites, (3) resolution of issues for use by th sites, (4) develop a private sector willing sellers, and (5) conduct ps. Contributes to fish passage ader, Institute for Fisheries
98	sJR s	SR			98 B. Status of Initiating a feasibility study of restoring steelhead migration into upper watershed areas (e.g., upstream of major low- elevation dams) in the Tuolumne River Ecological Management Unit	ERP-98-N02	Oct-98	Mar-00	49,000	71,000	120,000	Institute for Fisheries Resources (IFR)	Dr. Guy D. Phillips		Expanding California Salmon Habitat to Alter Dams and Diversions	The project has five basic features: 1 financing of the opportunity for acqui from willing sellers, (2) identify car develop a template for analysis and public and agencies for all potential mechanism to acquire dams from community and peer review worksho all EMZs. <i>William F. "Zeke" Gr</i> <i>Resources.</i>	sition/modification of private dam ididate Central Valley sites, (3) resolution of issues for use by th sites, (4) develop a private secto willing sellers, and (5) conduct ps. Contributes to fish passage ader, Institute for Fisheries

86	86	
SJR	SJR	
SR	SR	
feasibility study of restoring steelhead migration into upper watershed areas (e.g., upstream of major low- elevation dams) in the Merced River Ecological Management Unit	watershed areas (e.g., upstream of major low- elevation dams) in the Merced River Ecological Management Unit 98 C. Status of Initiating a	98 C. Status of Initiating a feasibility study of restoring steelhead migration into upper
ERP-98-N02	AFRP-02-03	
Oct-98		
Mar-00		
49,000		
71,000		
120,000		
Institute for Fisheries Resources (IFR)	AFRP	
Dr. Guy D. Phillips	Jeff McLain USFWS	
to Alter Dams and Diversions	Dam on the Merced River	A Feasibility Investigation of Reintroduction of Anadromous Salmonids Above Crocker-Huffman
financing of the opportunity for acquisition/modification of private dams from willing sellers, (2) identify candidate Central Valley sites, (3) develop a template for analysis and resolution of issues for use by the public and agencies for all potential sites, (4) develop a private sector mechanism to acquire dams from willing sellers, and (5) conduct community and peer review workshops. Contributes to fish passage in all EMZs. <i>William F. "Zeke" Grader, Institute for Fisheries Resources. Planning</i>	establishing migratory passage and fish protection at Crocker Huffman Dam, investigate the biological production potential of the riverine habitat between Crocker-Huffman and Merced Falls dams for anadromous salmonids, and assess the implications for, and interactions of such a restoration action with ongoing and future planned Merced River Hatchery operations. <i>This contract was</i> <i>awarded in August of 2002. River habitat exploration has been</i> <i>delayed due to access problems. TID and Natural Resource</i> <i>Scientists are currently pursuing boat launch possibilities.</i> The project has five basic features: 1) document the extent, timing, and	Objective: Examine the opportunities and constraints of anadromous salmonid reintroduction upstream of Crocker-Huffman Dam by analysis of biological and technical issues associated with the potential for

					MULTI	SPECIES (CONSE	RVAT	ION ST	RATEG	BY MILE	STONE 9	99 ROLLE	D UF	SUMMARY		
oarrie greate 25% o divers Basin scree	er fish er tha of all sions . Arr ned a Vest	screens o in 250 cfs i smaller un in the San iong those are the El S Stanislaus	stall positive in all diversions in all EMZs and screened Joaquin River diversions to be Solyo, Patterson, irrigation district			PROJECTS REVIEWED - ERP-01-N56, ERP-02-P16, AFRP-02-02		conduct th installation AFRP coni Implement Goodwin E milestone. unscreene been insta specifically	e planning, (of a positive tract funding ation of Prio Dam" could o There are d diversions lled on any o v targeted div Patterson (19	design, and e e barrier fish the "Conser ritized Resto contribute in e only 2 dive (25% equals diversions in versions hav	environmenta screen and i nsus Based F oration/Resea an indirect w rsions > 250 s 118). No p the San Joac re been scree	I review necess s about 10% co Plan to Direct th irch in the Stani ay to completion cfs and there an ositive barrier fi quin River Basir	ompleted. The le Long Term islaus River Below n of this re 472 smaller ish screens have n and none of the yo (5 diversions -			AGENCY NOTES	NOTES CONT'D
		M	ULTI SPECIE	S CONSERV	ATION STRATEGY	/ MILESTC			LUATIO	ON OF I		UAL PRO	DJECTS RE		/ED TO FORMULATE T	HE ROLLED UP SUMN	IARY
MS Number	REGION	Project Type	Milestone	ERP Targets taken from ERPP Vol 2	MS Components or Questions for field personnel	ERP PROJECT NUMBERS	CONT START DATE	END DATE	CALFED	Cost Share	Total Project Cost	Applicant	Principal Investigator	Quantifiable Units	Project Name	Comm	ints
		Install po screens greater t EMZs ar unscreer San Joar Among t screened Patterso	ositive barrier fish on all diversions han 250 cfs in all nd 25% of all smaller ned diversions in the quin River Basin. hose diversions to be d are the El Solyo, n, and West s irrigation district		99 A. Status of installing positive barrier fish screens on all diversions greater than 250 cfs in the San Joaquin River Basin EMZ												
66	sjr	SR			99 B. Status of installing positive barrier fish screens on 25 % of all smaller diversions in the San Joaquin River Basin EMZ												
					99 C. Status of installing a positive barrier fish screen at El Solyo district diversion												
	sJR SJR				99 D. Status of installing a positive barrier fish screen at Patterson district diversion							Patterson			Patterson Irrigation District Positive Fish Barrier Fish Screen Study on San Joaquin River Diversion	This project develops the design and for the 195 CFS diversion on the Sar Irrigation District. <i>Planning, Fea</i> <i>completed; John Swiegard, Pa</i>	Joaquin River for the Patters sibility, and Design project
66	Ś	<u>8</u>			99 D. Status of installing a positive barrier fish screen at Patterson district diversion	ERP-01-N56	Aug-01	Jun-02	175,000		175,000	District Patterson	John Sweigard		Patterson Irrigation District Fish Screen Design and Environmental Review	Installation of a positive barrier fis Patterson Irrigation District. Plann project that is just getting :	ing and Design. This is a ne
66	SJR	SR				ERP-02-P16	Sep-03	Sep-04	611,000		611,000	Irrigation District	John Sweigard				

						CONT	RACT						Jnits		
MS Number	REGION Project Type	Milestone	ERP Targets taken from ERPP Vol 2		ERP PROJECT NUMBERS	START DATE	END DATE	CALFED Award	Cost Share	Total Project Cost	Applicant	Principal Investigator	Quantifiable L	Project Name	Comments
				99 E. Status of installing a positive barrier fish screen at West Stanislaus district diversion										Develop a Consensus Based Plan to Direct the Long Term Implementation of Prioritized Restoration/Research in the Stanislaus River Below Goodwin Dam	Objective: Develop a consensus based plan to direct the long term implementation of prioritized restoration/research in the Stanislaus River below Goodwin Dam. The project is currently focused on finishing a summary of the existing fisheries data. The summary will be provided to the Stanislaus River Fish Group for review and comment in January 2004. Work continues on the Restoration Plan and conceptual model.
66	SJR SR				AFRP-02-02						AFRP	JD Wikert USFWS			

					MULTI	SPECIES	CONSE	ERVAT	ION ST	RATEG	Y MILE	STONE 1	00 ROLL	ED U	P SUMMARY		
cond II Re · Co Stoc · De · Fin low by th · Fin caus · Imp prace	ditior eport mple kton fine aliza DO f ne C aliza se lo olem	ns (I t): ete s and atior for in centr atior bw D nent s, as	E 100 Actions to minim DO sag) in lower San Joa studies of causes for DO implement corrective me n of investigation of meth nclusion in total maximur ral Valley RWQCB. n of Basin Plan Amendme O in the San Joaquin Riv appropriate source and o s recommended in the TN bstances loadings and m	aquin River nea sag in San Joa easures for DO ods to reduce c m daily load (TM ent and TMDL f ver. other controls a MDL, to reduce	r Stockton (from Phase quin River near sag. onstituents that cause IDL) recommendation or constituents that nd other management anthropogenic oxygen	PROJECTS REVIEWED - ERP-02D-P63		2001 (ERF causes of further valit the Peer F upstream, projects. and progree Amendme considerat Amendme phased ap	P-01-N61) ha low dissolved idated in the leview recorr construction Fhe studies p ess on develo in twill be ava ion for adopt nt will propos proach includ	ve provided a d oxygen (DC Peer Review mendations of an aeratic provided the t pilable for put ion by the CV be a phased a des a demon	substantial ii o sag) in the v Report from provide the on demonstra- basis for a si e TMDL for t olic review in vRWQCB in approach to astration aera	nformation on the San Joaquin Riv In July, 2002. The basis for a plan of ation project, and takeholder imple the RWQCB. A of April 2004 and July, 2004. The correct the DO p	ver. This was ese studies and of further studies d other pilot mentation plan draft Basin Plan scheduled for e Basin Plan roblem. The he DWSC, further	consider while mc sources complete the DO v remainin (contrac projects should b dissolve following aeration impleme as part c projects (SWRCE mileston dissolve future ac	RY continued- The aeration project is red to be an interim control solution ore detailed studies on the upstream of oxygen depleting substances are ed. A final Basin Plan Amendment for will be completed in 2008. The g studies on sources and causes t under development) and the modeling (ERP-02D-P50 and ERP-02D-P51) be completed in 2007. In the interim, d oxygen conditions should improve g completion and activation of the demonstration project (2005). The final entation solution will be identified in 2008 of the final TMDL. There are other under different grant programs B Prop 50 Grants) that contribute to this be but were not evaluated. The d oxygen issue and the current and ctions will affect the SJR in both the id San Joaquin River regions.	AGENCY NOTES	NOTES CONT'D
			MULTI SPECIE		ATION STRATEG	Y MILESTC	ONE 10	0 EV	ALUATI	ON OF	INDIVI	DUAL PR	OJECTS R		WED TO FORMULATE ⁻	THE ROLLED UP SUMI	MARY
MS Number	REGION	Project Type	Milestone	ERP Targets taken from ERPP Vol 2	MS Components or Questions for field personnel	ERP PROJECT NUMBERS	CON1 START DATE	END DATE	CALFED Award	Cost Share	Total Project Cost	Applicant	Principal Investigator	Quantifiable Units	Project Name	Comme	nts
100	SJR	SR	Actions to minimize or eliminate low dissolved oxygen conditions (DO sag) in lower San Joaquin River near Stockton (from Phase II Report): • Complete studies of causes for DO sag in San Joaquin River near Stockton. • Define and implement corrective measures for DO sag. • Finalization of investigation of methods to reduce constituents that cause low DO for inclusion in total maximum daily load (TMDL) recommendation by the Central Valley RWQCB. • Finalization of Basin Plan Amendment and TMDL for constituents that cause low DO in the San Joaquin River. • Implement appropriate source and other controls and		100 A. Status of studies determining the causes for DO sag in the San Joaquin River near Stockton.		Mar-03			1,083,463		San Joaquin Valley Drainage Authority	Dan Nelson		Monitoring and Investigations of the San Joaquin River and Tributaries Related to Dissolved Oxygen	This directed action study is focused oxygen-consuming materials in the S purpose of this study is to provide a <i>c</i> the sources and fate of oxygen-co watershed between Channel F	JR upstream of the DWSC. The comprehensive understanding o nsuming materials in the SJR
100	SJR	SR			100 B. Status of defining and implementing corrective measures for DO Sag												

MS Number	REGION	Project Type	Milestone	ERP Targets taken from ERPP Vol 2		ERP PROJECT NUMBERS	CONTF START DATE	END DATE	CALFED Award	Cost Share	Total Project Cost	Applicant	Principal Investigator	Quantifiable Units	Project Name	Comments
100		SR			100 C. Status of investigation of methods to reduce constituents that cause low DO for inclusion in total maximum daily load recommendation by the Central Valley RWQCB											
100		SR			100 D. Status of finalization of Basin Plan Amendment for TMDL for constituents that cause low DO in the San Joaquin River.											
100	SJR	SR			100 E. Status of implementation of appropriate source and other controls and other management practices to reduce anthropogenic oxygen depleting substances loadings and minimize or eliminate low DO conditions.											

					MULTI	SPECIES (CONSE	RVATIO	ON STR	RATEG	Y MILES	STONE 10	1 ROLLI	ED UP	SUMMARY		
imple reduc subs disch	emer ce po tanco arge ng o	nt, an olluta æs, n es fro	101 Develop, Id support measures to int (oxygen depleting utrients, and ammonia) om concentrated animal tions. (from Phase II	,		PROJECTS REVIEWED - ERP-98-B32		outreach/e feeding op of nitrate in project has There may Prop 50) the were not e	education ar perations. S n the SJR as s impacted a y be other pu hat would co evaluated. S	d new data a tudy results s and tributaries animal feedin rojects under ontribute mor	about water of show the anii . It is unclea g practices a different gra e directly to t s 27, 45, and	more indirectly tr uality impacts fr nal waste is a sia r how the outres ind discharges tr nt programs (SW his milestone. O I 73 for additiona	om animal gnificant source ch/education o the SJR. /RCB 319 (j) or ther projects			AGENCY NOTES	NOTES CONT'D
MS Number	REGION	Project Type		ES CONSER\	MS Components or Questions for field	ERP PROJECT	CONT	END	CALFED		Total Project		Principal	Quantifiable Units	/ED TO FORMULATE T		
101	SJR		Milestone Develop, implement, and support measures to reduce pollutant (oxygen depleting substances, nutrients, and ammonia) discharges from concentrated animal feeding operations. (from Phase II Report)		personnel 101 A. Status of development of measures to reduce pollutant (oxygen depleting substances, nutrients, and ammonia) discharges from concentrated animal feeding operations. (from Phase II Report)	NUMBERS	DATE Nov-98	DATE Feb-99	Award 28.000	Cost Share	28.000	Applicant Committee for Sustainable Agriculture	Investigator		Project Name Environmental Agriculture Conferences and Field Tours	Comm Provides educational conferences agricultural practices that can be u dairies, agricultural advisors, and in of the San Joaquin River and the Si tributaries. Zea Sonnabend, Eco Education; proje	about environmentally sound sed by local growers, ranchers, ustrial related natural resources anislaus, Merced and Tuolumne ogical Farming Association.
101	SJR SJR				101 B. Status of implementing measures to reduce pollutant (oxygen depleting substances, nutrients, and ammonia) discharges from concentrated animal feeding operations (from Phase 11 Report)							. ground					

				MULTI S	PECIES C	ONSE	RVATI	ON STI	RATEG	Y MILE	STONE 1	02 ROLLE	ED U	P SUMMARY		
disso espec Stanis · Dev habita · Con subst · Dev (BMP	ived o cially slaus elop i at. duct o rate l elop a s), in	oxyg in th Rive inter com ow [and clud	102 Actions to minimize or eliminate ir len conditions in salmonid spawning and le Mokelumne, Cosumnes, American, M ers (from Phase II Report and Water Qu -substrate DO testing for salmonid spaw prehensive surveys to assess the exten DO conditions. begin implementing appropriate best main ing reducing anthropogenic fine sedime substrate low DO conditions.	d rearing habitat, Merced, Tuolumne, and uality Program Plan): wning and rearing nt and severity of inter- anagement practices	PROJECTS REVIEWED - ERP-97-N21		substrate I Two project replenishm improved i other project may be oth directly to	ow dissolve ts contribut nent to impro nter-substra ect resulted i ner projects this milestor	d oxygen co e to this mile ove critical fin te DO (spec in improvemender differen ne but were n	nditions for s estone. One sheries habita cific information ents in soil er ent grant prog	osion and sedin grams that would I. See milestone	aring habitat. in gravel			AGENCY NOTES	NOTES CONT'D
			MULTI SPECIES CONSERVA	ATION STRATEGY	MILESTO	NE 102	2 EVA	ALUATI	ON OF	INDIVI	DUAL PR	OJECTS RE	EVIE\	WED TO FORMULATE 1	THE ROLLED UP SUN	IMARY
MS Number	REGION	Project Type	ERP Targets taken Milestone from ERPP Vol 2	MS Components or Questions for field personnel	ERP PROJECT NUMBERS	CONT START DATE	END DATE	CALFED	Cost Share	Total Project Cost	Applicant	Principal Investigator	Quantifiable Units	Project Name	Comm	ients
102	SJR		Actions to minimize or eliminate inter-substrate low dissolved oxygen conditions in salmonid spawning and rearing habitat, especially in the Mokelumne, Cosumnes, American, Merced, Tuolumne, and Stanislaus Rivers (from Phase II Report and Water Quality Program Plan): • Develop inter-substrate DO testing for salmonid spawning and rearing habitat. • Conduct comprehensive surveys to assess the extent and severity of inter-substrate low DO conditions. • Develop and begin implementing appropriate best management practices (BMPs), including reducing anthropogenic fine sediment loads. to minimize or eliminate	102 A. Status of actions to minimize or eliminate inter- substrate low dissolved oxygen conditions in salmonid spawning and rearing habitat, especially in the Mokelumne, Cosumnes, American, Merced, Tuolumne, and Stanislaus Rivers (from Phase II Report and Water Quality Program Plan):	ERP-97-N21	Sep-98	Sep-01	536,410	97,000	633,410	Carl Mesick Consultants	Carl Mesick		Knights Ferry Gravel Replenishment	This project will minimize DO conc completed. JD V	
102	SJR	SR		102 B. Status of the development of inter- substrate DO testing for salmonid spawning and rearing habitat.												
102	SJR	SR		102 C. Status of conducting comprehensive surveys to assess the extent and severity of inter-substrate low DO conditions												
102	sJR	SR		102 D. Status of developing and begin implementing appropriate best management practices (BMPs), including reducing anthropogenic fine sediment loads, to minimize or eliminate inter-substrate low DO conditions.												

					MULTI	SPECIES	CONSE	RVAT	ON ST	RATEG	Y MILE	STONE 1	03 ROLL	ED UI	P SUMMARY		
ecol conc addi anth	ogica dition ng o ropo	al ef ns in xyge	103 Assess the fects of low DO Suisun Marsh due to en-depleted water from ic sources (from Water ram Plan).			PROJECTS REVIEWED -		effects of le water from San Joaqu	ow DO conc anthropoge	litions in Suis enic sources. ion unless it i	un Marsh du This Milesto	rded that assess e to adding oxyg one needs to be o address known	gen-depleted modified to fit the			AGENCY NOTES	NOTES CONT'D
			MULTI SPECIE	S CONSERV	ATION STRATEG	Y MILESTC	ONE 103	3 EV	ALUAT	ION OF	INDIVII	DUAL PR	OJECTS RI	EVIE	WED TO FORMULATE	THE ROLLED UP SUM	MARY
103 MS Number	SJR REGION	SR Project Type	Milestone Assess the ecological effects of low DO conditions in Suisun Marsh due to adding oxygen- depleted water from anthropogenic sources (from Water Quality Program Plan).		MS Components or Questions for field personnel 103 A. Status of the assessment of the ecological effects of low DO conditions in Suisun Marsh due to adding oxygen-depleted water from anthropogenic sources (from Water Quality Program Plan).	ERP PROJECT NUMBERS	CONT START DATE	END DATE	CALFED Award	Cost Share	Total Project Cost	Applicant	Principal Investigator	Quantifiable Units	Project Name	Comme	nts

					MULTI	SPECIES (CONSE	RVATI	ON ST	RATEG	Y MILE	STONE 1	04 ROLL	ED U	P SUMMARY		
regul disch subs	lator narge tanc ermit	ry a e of ces tted	E 104 Encourage ictivity to reduce f oxygen reducing and nutrients by dischargers. (from port)			PROJECTS REVIEWED -		taken by El However, ti under their animal was programs (contribute r this evaluat	RP to enco he ERP sta authority (a ste program Especially t more direct tion. See m	urage regulat ff works close agricultural was). There are the recent SV ly to this mile	ory activities ely with the aiver and no likely other VRCB Prop stone. Thos	n-point source p projects under d 50 solicitations) t	milestone. are taking steps ollution and ifferent grant hat would not addressed in			AGENCY NOTES	NOTES CONT'D
			MULTI SPECIE	S CONSERV	ATION STRATEGY	/ MILESTO	NE 104	4 EV/	ALUAT	ION OF	INDIVI	DUAL PR	OJECTS R	EVIEV	NED TO FORMULATE	THE ROLLED UP SUM	MARY
104 MS Number	SJR REGION	SR Project Type	Encourage regulatory activity to reduce discharge of oxygen reducing substances and nutrients by unpermitted dischargers. (from Phase II Report)	ERP Targets taken from ERPP Vol 2		ERP PROJECT NUMBERS	CONT START DATE	END DATE	CALFED Award	Cost Share	Total Project Cost	Applicant	Principal Investigator	Quantifiable Units	Project Name	Comn	ents

				MULT	SPECIES	CONSE	ERVAT	ION ST	RATEG	Y MILES	STONE 10	5 ROLLE	D UF	SUMMARY		
espec River and V · Part · Impl Iands · Impl · Qua	s, and S vater Qu icipate in ement s , for urb ement s ntify and	105 Actions to reduce olumne, Merced, Stanisla conoma Creek, due to hur Jality Program Plan): n implementation of USD ediment reduction BMPs an storm water runoff, an stream restoration and rev d determine ecological im mplement corrective action	aus, Cosumnes, man activities (f A sediment redu in construction d other specific vegetation work apacts of sedime	Napa, and Petaluma rom Phase II Report uction program. areas, on agricultural sites.	PROJECTS REVIEWED - ERP-97-N21, ERP-98-B32, ERP-00-E02, ERP-00-E02, ERP-01-N30, ERP-02-P36, AFRP-01-12, AFRP-02-02, AFRP-02-11		projects ta erosion, sa watershed Tuolumne habitat and these proj the availat sediment l contribute	ke steps (eit edimentation ls. At least 3 and Merced d riparian for ects participa ble informatio loading. Projuto this miles	her through p and fine sedi projects are) with high im est was resto ated in the US on. BMPs wer ects from othe tone but were	lanning, educ ment loading located in key portance for a red over a 2 n DA sediment e used to ach er fund source not evaluated	ieve the objective and programs	on) to reduce mento Valley inislaus, nabitat. Salmon gree to which m is unclear from es of reduced may also es 29, 47, and 76			AGENCY NOTES	NOTES CONT'D
Der	ype		S CONSER\	ATION STRATEG		1	5 EV	ALUAT		INDIVIE		JECTS RE		VED TO FORMULATE T	HE ROLLED UP SUMM	IARY
MS Number	REGION Project Type	Milestone	ERP Targets taken from ERPP Vol 2	MS Components or Questions for field personnel	ERP PROJECT NUMBERS	START DATE	END DATE	CALFED Award	Cost Share	Total Project Cost	Applicant	Principal Investigator	Quantifiable Units	Project Name	Comme	ante
105	S.R. S.R.	Actions to reduce fine sediment loading to streams, especially Tuolumne, Merced, Stanislaus, Cosumnes, Napa, and Petaluma Rivers, and Sonoma Creek, due to human activities (from Phase II Report and Water Quality Program Plan): • Participate in implementation of USDA sediment reduction program. • Implement sediment reduction BMPs in construction areas, on agricultural lands, for urban storm water runoff, and other specific sites. • Implement stream restoration and revegetation work. • Quantify and determine ecological impacts of sediments in target watersheds, implement corrective actions.		105 A. Status of actions to reduce fine sediment loading to streams in the Tuolumne River due to human activities (from Phase II Report and Water Quality Program Plan):	ERP-97-N21	Sep-98	Sep-01	536,410		633,410	Carl Mesick Consultants	Carl Mesick		Knights Ferry Gravel Replenishment	Implement stream restoration work to the Stanislaus River. Adding silt-fr concentrations of fine sediments thro <i>completed. Multiphased project v</i> <i>CALFED funded phases.</i>	o reduce fine sediment loading to ee gravel should alleviate high ugh trapping and burial. <i>Projec</i> <i>with several subsequent non-</i> <i>J.D. Wikert, USFWS</i> .
105	sJR SR			105 A. Status of actions to reduce fine sediment loading to streams in the Tuolumne River due to human activities (from Phase II Report and Water Quality Program Plan):				868,600		868.600	Westside Resource Conservation District	Nettie Drake		Panoche/Silver Creek Watershed Management and Action Plan	This project will involve detailed tu recommended in the Panoche/Silver I managing erosion and reducing se delivered from the upper watersi Implementation project is 80% com RCD. (Note: As parsed, geograph allow for incorporation of this pro not affect the Tuolumne River, it is the greater westside S	Creek Watershed Assessment for diment and other contaminants ned during high flow events. appleted. Sarge Green, Westsid icially this milestone does not ject, so while this project will a affecting sediment loading in

MS Number	REGION	Project Type	Milestone	ERP Targets taken from ERPP Vol 2	MS Components or Questions for field personnel	ERP PROJECT NUMBERS	CONT START DATE	END DATE	CALFED	Cost Share	Total Project Cost	Applicant	Principal Investigator	Quantifiable Units	Project Name	Comments
					105 A. Status of actions to							- pp			Digital Soil Survey Mapping and Digital	Five published Soil Survey Areas (East Stanislaus Area, Merced Area,
					reduce fine sediment loading to streams in the Tuolumne River due to human activities (from Phase II Report and Water Quality Program Plan):							Natural Resources			Orthophotoquad Imagery Development	Madera Area, Tehama County, Glenn County) in the Bay-Delta Region will be digitized, have SSURGO databases created, and have Digital Orthophotoquad (DOQ) imagery developed. <i>Glenn Stanisewski,</i> <i>Natural Resources Conservation Service. Monitoring; 80%</i> <i>complete. Soils information can be used to address turbidity/</i> <i>sedimentation in the Sacramento and San Joaquin Watersheds.</i>
105	SJR	К				ERP-01-N30	Aug-01	Aug-04	573.810	287.901	861.711	Conservation Service	Eric Vinson			
105	~	SR			105 A. Status of actions to reduce fine sediment loading to streams in the Tuolumne River due to human activities (from Phase II Report and Water Quality Program Plan):	ERP-01-N09		Aug-04		207,901	910.468	Turlock Irrigation District	Wilton Fryer		Tuolumne River Fine Sediment Management	Actions to reduce fine sediment loading to Tuolumne River from the Gasburg Creek tributary. <i>This is a planning, design and</i> <i>implementation project. Implementation has not started, yet the</i> <i>planning and design phases are completed. Project is 32%</i> <i>complete. Wilton Fryer, Turlock Irrigation District.</i>
					105 A. Status of actions to reduce fine sediment loading to streams in the Tuolumne River due to human activities		ridg 04	Jug 04	010,400		010,400	District	Witten Tryes		Partner with Modesto City and County Parks Departments for Restoration Planning and Implementation on the Gateway Parcel	Objective: Incorporate habitat needs of salmonids in developing the updated Tuolumne River Regional Park Land Use and Master plans. Acquisition of the Gateway parcel located in the center of the regional park has necessitated the development of new land
					(from Phase II Report and Water Quality Program Plan):											use and master plans for the park. The principal tasks involved in this planning effort include: (1) development of a preliminary program that broadly defines potential uses and activities within the Park corridor and a set of baseline environmental objectives; (2) soliciting public and agency comment in part by conducting interviews with key stakeholders and facilitating public workshops and meetings; (3) conducting reconnaissance-level field studies to document environmental setting and identify environmental opportunities and constraints; (4) prepare environmental documentation (EIR/EA); and (5) prepare Land Use Plan and Gateway Master Plan. This planning effort will affect a seven mile reach of the Tuolumne River that is used primarily as a migration corridor by fall-run Chinook salmon.
105	SJR	SR				AFRP-02-11						AFRP	Jeff McLain			
105	SJR	SR			105B. Status of the sub element of actions to reducing fine sediment loading to the Tuolumne River: Participate in implementation of USDA sediment reduction program.	ERP-01-N09	Aug-04	Aug-04	910.468		910.468	Turlock Irrigation District	Wilton Fryer		Tuolumne River Fine Sediment Management	Actions to reduce fine sediment loading to Tuolumne River from the Gasburg Creek tributary. <i>This is a planning, design and</i> <i>implementation project. Implementation has not started, yet the</i> <i>planning and design phases are completed. Project is 32%</i> <i>complete. Wilton Fryer, Turlock Irrigation District.</i>
105	SJR	SR			105B. Status of the sub element of actions to reducing fine sediment loading to the Tuolumne River: Participate in implementation of USDA sediment reduction program.	ERP-98-B32		Feb-99	28,000	0	28,000	Committee for Sustainable Agriculture	Cathy Holden		Environmental Agriculture Conferences and Field Tours	Provides educational conferences about environmentally sound agricultural practices that can be used by local growers, ranchers, dairies, agricultural advisors, and industrial related natural resources of the San Joaquin River and the Stanislaus, Merced and Tuolumne tributaries. Zea Sonnabend, Ecological Farming Association. <i>Education; project completed.</i>

	1								1							
		9					CONT	RACT						ø		
MS Number	-	Project Type												Quantifiable Units		
Nun	REGION	ect			MS Components or		OTADT	END.			Total		Durin almost	ntif s		
NS I	SEC.	Proj	Milestone	ERP Targets taken from ERPP Vol 2	Questions for field personnel	ERP PROJECT NUMBERS	START DATE	END DATE	CALFED Award	Cost Share	Project Cost	Applicant	Principal Investigator	Qua	Project Name	Comments
_	-		Milestone		105C Status of the sub	NUMBERO	DAIL	DAIL	Awaru	oost onare	0031	Applicant	investigator	0 2	Tuolumne River watershed outreach	Objective: To create and utilize outreach materials as tools to
					element of actions to reducing										and stewardship proposal	build awareness, understanding and support for the Tuolumne
					fine sediment loading to the											River Technical Advisory Committee Plan, "Habitat Restoration
					Tuolumne River: Implement sediment reduction BMPs in											Plan for the Lower Tuolumne River Corridor". The cooperative agreement between the AFRP and TRPT was completed in
					construction areas, on											October of 2001. TRPT released two documents: the Tuolumne
					agricultural lands, for urban											River Watershed Map and the Lower Tuolumne River Corridor
					storm water runoff, and other											and Its Lands; a brochure depicting land use patterns in the
					specific sites.											Tuolumne River corridor. The TRPT received a no-cost time extension extending the end date to April 2003 to complete their
																outreach to landowners who might be interested in easement
																opportunities. TRPT submitted a final report in August 2003
																documenting their outreach efforts. This report, along with the Tuolumne River Watershed Map and the Lower Tuolumne River
																Corridor and Its Lands can be found on the AFRP website.
105	SJR	Ж				AFRP-01-12		Aug-03				AFRP	Cesar Blanco USFWS			
<u> </u>				1	105D. Status of the sub										Tuolumne River watershed outreach	Objective: To create and utilize outreach materials as tools to
					element of actions to reducing fine sediment loading to the										and stewardship proposal	build awareness, understanding and support for the Tuolumne River Technical Advisory Committee Plan, "Habitat Restoration
					Tuolumne River:											Plan for the Lower Tuolumne River Corridor". The cooperative
					Implementation of stream											agreement between the AFRP and TRPT was completed in
					restoration and revegetation work.											October of 2001. TRPT released two documents: the Tuolumne River Watershed Map and the Lower Tuolumne River Corridor
					WOIK.											and Its Lands; a brochure depicting land use patterns in the
																Tuolumne River corridor. The TRPT received a no-cost time
																extension extending the end date to April 2003 to complete their
																outreach to landowners who might be interested in easement opportunities. TRPT submitted a final report in August 2003
																documenting their outreach efforts. This report, along with the
																Tuolumne River Watershed Map and the Lower Tuolumne River
																Corridor and Its Lands can be found on the AFRP website.
1																
105	sJR	SR				AFRP-01-12		Aug-03				AFRP	Cesar Blanco USFWS			
					105E. Status of the sub										The Ecological and Economic Costs	The primary goal of this project is to quantify the ecological and
1					element of actions to reducing fine sediment loading to the										and Benefits of Alternative Agricultural Practices: Sediment, Nutrient, and	economic costs and benefits of alternative agricultural practices in irrigated row cropping systems, at the farm and societal levels.
1					Tuolumne River: Quantify and										Pesticides in Runoff from Conservation	Project not completed. This project will determine the impacts of
1					determine ecological impacts							University of			Tillage and Cover Cropped Systems	reduced runoffs; hopes to decrease soil organic carbon, measure
1					of sediments in target watersheds, implement							California,				sediments and pesticides, and conduct analysis of water quality. Steve Temple, UC Davis.
	~				corrective actions.							Davis - Agronomy and				otore remple, oo baria.
105	SJR	SR				ERP-02-P36	Jun-03	Jun-06	1,402,159	0	1,402,159		Dr. Steve Temple		Married Divers On 11, D. 1, 11	
1					105 F. Status of actions to reduce fine sediment loading										Merced River Corridor Restoration Plan	Project will identify major sources of fine sediment and assess the effects of fine sediment on ecosystem processes and habitat quality.
					to streams in the Merced River											Project will address historical and current supply and transport of
1					due to human activities (from											coarse and fine sediment. Jeff McLain, Planning. Final Plan
1					Phase II Report and Water Quality Program Plan):											completed. The final plan recommends actions to re-establish floodplain at elevations that are functional under the
1					Quality Flograff Fidil).							Stillwater				contemporary regulated flow regime, to establish a floodplain
1												Sciences &				corridor and reconnect the river to its floodplain.
1												Merced Co.	In a straight to the st			
105	sJR	SR				ERP-98-E09	Sep-98	Apr-01	300,000	26,552	326,552	Planning and Development	Jennifer Vick/Bob Smith			
					105G. Status of the sub										Environmental Agriculture	Provides educational conferences about environmentally sound
1					element of actions to reducing fine sediment loading to the										Conferences and Field Tours	agricultural practices that can be used by local growers, ranchers, dairies, agricultural advisors, and industrial related natural resources
1					Merced River: Participate in											of the San Joaquin River and the Stanislaus, Merced and Tuolumne
					implementation of USDA							Committee f				tributaries. Project completed. Zea Sonnabend, Ecological
10	R				sediment reduction program.							Committee for Sustainable				Farming Association.
105	SJR	SR				ERP-98-B32	Nov-98	Feb-99	28,000	0	28,000	Agriculture	Cathy Holden			

			<u>г</u>													
nber	z	Type					CONT	RACT						Quantifiable Units		
MS Number	REGION	Project Type		ERP Targets taken	MS Components or Questions for field	ERP PROJECT		END	CALFED		Total Project		Principal	uantif nits		
105 M	SJR	SR	Milestone	from ERPP Vol 2	personnel 105H Status of the sub element of actions to reducing fine sediment loading to the Merced River: Implement sediment reduction BMPs in construction areas, on agricultural lands, for urban storm water runoff, and other specific sites.	NUMBERS	DATE	DATE	Award	Cost Share	Cost	Applicant	Investigator	σ⊐	Project Name	Comments
105 1	SJR S	SR			1051. Status of the sub element of actions to reducing fine sediment loading to the Merced River: Implementation of stream restoration and revegetation work.											
105	SJR	SR			105J. Status of the sub element of actions to reducing fine sediment loading to the Merced River: Quantify and determine ecological impacts of sediments in target watersheds, implement corrective actions.	ERP-02-P36	Jun-03	Jun-06	1,402,159	0	1,402,159	University of California, Davis - Agronomy and Range Science	Dr. Steve Temple		The Ecological and Economic Costs and Benefits of Alternative Agricultural Practices: Sediment, Nutrient, and Pesticides in Runoff from Conservation Tillage and Cover Cropped Systems	The primary goal of this project is to quantify the ecological and economic costs and benefits of alternative agricultural practices in irrigated row cropping systems, at the farm and societal levels. Project not completed. This project will determine the impacts of reduced runoffs; hopes to decrease soil organic carbon, measure sediments and pesticides, and conduct analysis of water quality. Steve Temple, UC Davis.
					105 K. Status of actions to reduce fine sediment loading to streams in the Stanislaus River due to human activities (from Phase II Report and Water Quality Program Plan):				1,102,100		1,102,100				Develop a Concensus Based Plan to Direct the Long Term Implementation of Prioritized Restoration/Research in the Stanislaus River Below Goodwin Dam	Objective: Develop a consensus based plan to direct the long term implementation of prioritized restoration/research in the Stanislaus River below Goodwin Dam. The project is currently focussed on finishing a summary of the existing fisheries data. The summary will be provided to the Stanislaus River Fish Group for review and comment in January 2004. Work continues on the Restoration Plan and conceptual model.
105	SJR	SR				AFRP-02-02						AFRP	JD Wikert			
105	SJR	SR			105L. Status of the sub element of actions to reducing fine sediment loading to the Stanislaus River: Participate in implementation of USDA sediment reduction program.	ERP-98-B32	Nov-98	Feb-99	28,000	0	28,000	Committee for Sustainable Agriculture	Cathy Holden		Environmental Agriculture Conferences and Field Tours	Provides educational conferences about environmentally sound agricultural practices that can be used by local growers, ranchers, dairies, agricultural advisors, and industrial related natural resources of the San Joaquin River and the Stanislaus, Merced and Tuolumne tributaries. <i>Project completed. Zea Sonnabend, Ecological</i> <i>Farming Association.</i>
105	SJR 8	SR			105L. Status of the sub element of actions to reducing fine sediment loading to the Stanislaus River: Participate in implementation of USDA sediment reduction program.	AFRP-02-02			,000	~	,	AFRP	JD Wikert		Develop a Concensus Based Plan to Direct the Long Term Implementation of Prioritized Restoration/Research in the Stanislaus River Below Goodwin Dam	Objective: Develop a consensus based plan to direct the long term implementation of prioritized restoration/research in the Stanislaus River below Goodwin Dam. The project is currently focussed on finishing a summary of the existing fisheries data. The summary will be provided to the Stanislaus River Fish Group for review and comment in January 2004. Work continues on the Restoration Plan and conceptual model.
105	SJR	SR			105M Status of the sub element of actions to reducing fine sediment loading to the Stanislaus River: Implement sediment reduction BMPs in construction areas, on agricultural lands, for urban storm water runoff, and other specific sites.	AFRP-02-02						AFRP	JD Wikert		Develop a Concensus Based Plan to Direct the Long Term Implementation of Prioritized Restoration/Research in the Stanislaus River Below Goodwin Dam	Objective: Develop a consensus based plan to direct the long term implementation of prioritized restoration/research in the Stanislaus River below Goodwin Dam. The project is currently focussed on finishing a summary of the existing fisheries data. The summary will be provided to the Stanislaus River Fish Group for review and comment in January 2004. Work continues on the Restoration Plan and conceptual model.
105	SJR S	SR			105N. Status of the sub element of actions to reducing fine sediment loading to the Stanislaus River: Implementation of stream restoration and revegetation work	AFRP-02-02						AFRP	JD Wikert		Develop a Concensus Based Plan to Direct the Long Term Implementation of Prioritized Restoration/Research in the Stanislaus River Below Goodwin Dam	Objective: Develop a consensus based plan to direct the long term implementation of prioritized restoration/research in the Stanislaus River below Goodwin Dam. The project is currently focussed on finishing a summary of the existing fisheries data. The summary will be provided to the Stanislaus River Fish Group for review and comment in January 2004. Work continues on the Restoration Plan and conceptual model.

														1		1
MS Number	REGION	Project Type	Milestone	ERP Targets taken from ERPP Vol 2	MS Components or Questions for field personnel	ERP PROJECT NUMBERS	CONT START DATE	END DATE	CALFED Award	Cost Share	Total Project Cost	Applicant	Principal Investigator	Quantifiable Units	Project Name	Comments
4			WINESCOILE		1050. Status of the sub element of actions to reducing fine sediment loading to the Stanislaus River: Quantify and determine ecological impacts of sediments in target watersheds, implement corrective actions.	NUMBERS	DATL	DAIL	Award		0031	University of California, Davis -	Investigator		The Ecological and Economic Costs and Benefits of Alternative Agricultural Practices: Sediment, Nutrient, and Pesticides in Runoff from Conservation Tillage and Cover Cropped Systems	The primary goal of this project is to quantify the ecological and economic costs and benefits of alternative agricultural practices in irrigated row cropping systems, at the farm and societal levels. Project not completed. This project will determine the impacts of reduced runoffs; hopes to decrease soil organic carbon, measure sediments and pesticides, and conduct analysis of water quality. Steve Temple, UC Davis.
105	SJR	SR				ERP-02-P36	Jun-03	Jun-06	1,402,159	0	1,402,159	Agronomy and Range Science	Dr. Steve Temple			
2	R				1050. Status of the sub element of actions to reducing fine sediment loading to the Stanislaus River: Quantify and determine ecological impacts of sediments in target watersheds, implement corrective actions.										Develop a Concensus Based Plan to Direct the Long Term Implementation of Prioritized Restoration/Research in the Stanislaus River Below Goodwin Dam	Objective: Develop a consensus based plan to direct the long term implementation of prioritized restoration/research in the Stanislaus River below Goodwin Dam. The project is currently focussed on finishing a summary of the existing fisheries data. The summary will be provided to the Stanislaus River Fish Group for review and comment in January 2004. Work continues on the Restoration Plan and conceptual model.
105	SJR	SR			105P. Status of actions to	AFRP-02-02						AFRP	JD Wikert			
105	SJR	SR			reduce fine sediment loading to streams in the Cosumes River due to human activities (from Phase II Report and Water Quality Program Plan):											
105	~	R			105Q. Status of the sub element of actions to reducing fine sediment loading to the Cosumnes River: Participate in implementation of USDA sediment reduction program.											
105	~	SR			105R Status of the sub element of actions to reducing fine sediment loading to the Cosumnes River: Implement sediment reduction BMPs in construction areas, on agricultural lands, for urban storm water runoff, and other specific sites.											
105	r	sr			105S. Status of the sub element of actions to reducing fine sediment loading to the Cosumnes River: Implementation of stream restoration and revegetation work.											
105	SJR				105T. Status of the sub element of actions to reducing fine sediment loading to the Cosumnes River: Quantify and determine ecological impacts of sediments in target watersheds, implement corrective actions.	ERP-02-P36	Jun-03	Jun-06	1,402,159	0	1,402,159	University of California, Davis - Agronomy and Range Science	Dr. Steve Temple		The Ecological and Economic Costs and Benefits of Alternative Agricultural Practices: Sediment, Nutrient, and Pesticides in Runoff from Conservation Tillage and Cover Cropped Systems	The primary goal of this project is to quantify the ecological and economic costs and benefits of alternative agricultural practices in irrigated row cropping systems, at the farm and societal levels. Project not completed. This project will determine the impacts of reduced runoffs; hopes to decrease soil organic carbon, measure sediments and pesticides, and conduct analysis of water quality. Steve Temple, UC Davis.

							CONT	РАСТ							
MS Number	REGION	Project Type	Milestone	ERP Targets taken from ERPP Vol 2	personnel	ERP PROJECT NUMBERS	START	END	CALFED Award Cost Share	Total Project Cost	Applicant	Principal Investigator	Quantifiable Units	Project Name	Comments
105	SJR	SR			105U. Status of actions to reduce fine sediment loading to streams in the Napa River due to human activities (from Phase II Report and Water Quality Program Plan):										
105	SJR	SR			105V. Status of the sub element of actions to reducing fine sediment loading to the Napa River: Participate in implementation of USDA sediment reduction program.										
105	SJR	SR			105W Status of the sub element of actions to reducing fine sediment loading to the Napa River: Implement sediment reduction BMPs in construction areas, on agricultural lands, for urban storm water runoff, and other specific sites.										
105	SJR S	SR			105X. Status of the sub element of actions to reducing fine sediment loading to the Napa River: Implementation of stream restoration and revegetation work.										
105		SR			105Y. Status of the sub element of actions to reducing fine sediment loading to the Napa River: Quantify and determine ecological impacts of sediments in target watersheds, implement corrective actions.										
105		SR			105Z. Status of actions to reduce fine sediment loading to streams in the Petaluma River due to human activities (from Phase II Report and Water Quality Program Plan):										
	SJR				105AA. Status of the sub element of actions to reducing fine sediment loading to the Petaluma River: Participate in implementation of USDA sediment reduction program.										
105		sr			105BB Status of the sub element of actions to reducing fine sediment loading to the Petaluma River: Implement sediment reduction BMPs in construction areas, on agricultural lands, for urban storm water runoff, and other specific sites.										

							CONT	RACT								
MS Number	z	Project Type			MS Components or						Total			Quantifiable Units		
N	REGION	ojec		ERP Targets taken		ERP PROJECT	START	END	CALFED		Project		Principal	anti its		
MS	RE	Pro	Milestone	from ERPP Vol 2	personnel	NUMBERS	DATE	DATE		Cost Share		Applicant	Investigator	a n	Project Name	Comments
					105CC. Status of the sub											
					element of actions to reducing											
					fine sediment loading to the Petaluma River:											
					Implementation of stream											
ŝ	ĸ	~			restoration and revegetation											
105	SJR	SR			work.											
					105DD. Status of the sub element of actions to reducing											
					fine sediment loading to the											
					Petaluma River: Quantify and											
					determine ecological impacts											
					of sediments in target											
					watersheds, implement corrective actions.											
5	ĸ	~			corrective actions.											
105	SJR	SR														
					105EE. Status of the sub element of actions to reducing											
					fine sediment loading to the											
					Sonoma Creek: Participate in											
					implementation of USDA											
					sediment reduction program.											
105	SJR	ĸ														
~		, , , , , , , , , , , , , , , , , , ,			105FF Status of the sub										1	
					element of actions to reducing											
					fine sediment loading to the											
					Sonoma Creek: Implement sediment reduction BMPs in											
					construction areas, on											
					agricultural lands, for urban											
					storm water runoff, and other											
105	SJR	SR			specific sites.											
					105GG. Status of the sub											
					element of actions to reducing											
					fine sediment loading to the Sonoma Creek:											
					Sonoma Creek: Implementation of stream											
2	ĸ	~			restoration and revegetation											
105	SJR	SR			work.											

					MULTI	SPECIES (CONSE	ERVAT	ION STR	RATEG	Y MILES	TONE 10	6 ROLLE	D UP	SUMMARY		
nece adve thres in se	ssary se eo hold o dimer ay-Do	rese colog conc nts a elta e	106 Conduct the earch to determine no gical/biological effects entrations for mercury nd key organisms in estuary and its			PROJECTS REVIEWED - ERP-07-C05, ERP-09-B06, ERP-02-C06A, ERP-02-C06B, ERP-02-C12, ERP-02D-P62, ERP-02-P12D, ERP-02-P12D, ERP-02-P40		shown tha bioaccumu concentral ERP has r sources, tr bioaccumu studies are However, mercury tr mercury st framework	t there are ma ulations, and v tion in sedime nade substan ansformation: ulation process e just beginnir at this time the ansformations trategy also pr s for future inv	any factors the we cannot see ints, without of tial investme s, and factor: ses. Two stu- ng that will ev- ere are still s s, bioaccumu rovides addit estigations to	hat affect merce than "effects the consideration ints for researd s controlling the udies have be valuate source ignificant know ignificant kn	ne methylation/d en completed, a es, processes ar wledge gaps in u ects to fish and v ion on what is ku	and rcury ors. However, iderstand mercury lemethylation and ind four more id effects. understanding wildlife. The nown, and a milestones 30, 48,			AGENCY NOTES	NOTES CONT'D
			MULTI SPECIES	S CONSER\	ATION STRATEG	Y MILESTC	NE 10	6 EV	ALUATI	ON OF	INDIVID	UAL PRO	JECTS RE	VIEW	/ED TO FORMULATE T	HE ROLLED UP SUMM	IARY
MS Number	REGION	Project Type	Milestone	ERP Targets taken from ERPP Vol 2	MS Components or Questions for field personnel	ERP PROJECT NUMBERS	CON1 START DATE	END DATE	CALFED Award	Cost Share	Total Project Cost	Applicant	Principal Investigator	Quantifiable Units	Project Name	Comm	unts
			Conduct the necessary research to determine no adverse ecological/biological effects threshold concentrations for mercury in sediments and key organisms in the Bay-Delta estuary and its watershed.		106 A. Status of the necessary research to determine no adverse ecological/biological effects threshold concentrations for mercury in sediments and key organisms in the Bay-Delta estuary and its watershed. (Work specific to a key organism in a specific watershed										CALFED Mercury Project: An Assessment of Ecological and Human Health Impacts of Mercury in the San Francisco Bay – Sacramento – San Joaquin Delta Watershed (California)	This large multifaceted research and cycling of mercury, including on avian populations. The in-d focused on the Sacramento River, the biogeochemical cycling com This milestone is difficult to achie concentrations are not well correle many other factors that influer bioaccumulation and effects. The significant gains in understanding but there are still many critical un understood. More studies are nee fish and wildlife, methylation/dem factors that influence rates, cont bioaccumulation and	project investigated sources bioaccumulation and effects epth study of sources was Cache Creek and the Delta, but bonent applies to all regions. we because mercury sediment ted with affects, and there are the methylation, exposure, results from this project made mercury sources and cycling, known processes that are not eded to understand effects on ethylation processes and the rollable sources of mercury,
106	SJR	SR				ERP-99-B06	Sep-00	Sep-03	4.062.058		4.062.058	San Jose State University Foundation - Moss Landing Marine Lab	Kenneth Coale				
106	SJR SJR	SR			106 A. Status of the necessary research to determine no adverse ecological/biological effects threshold concentrations for mercury in sediments and key organisms in the Bay-Delta estuary and its watershed. (Work specific to a key organism in a specific watershed	ERP-02D-C12			5.337.012		5,337,012	U.S. Fish and Wildlife Service	Tom Suchanek		Mercury in San Francisco Bay-Delta Birds: Trophic Pathways, Bioaccumulation and Ecotoxicological Risk to Avian Reproduction	NO CONTRACT STILL UNDER D comprehensive study to determ effects of mercury exposure and bi in the Bay-Delta. The guilds incl recurvirostrids. The project inclu reproductive effects, dietary expos histopathological effects	ine expsoure pathways and oaccumulation in 3 bird guilds ude: terns, diving ducks and des both field and lab studies, sure and bioaccumulation, and

							CONT	РАСТ								
MS Number	REGION	Project Type	Milestone	ERP Targets taken from ERPP Vol 2	MS Components or Questions for field personnel	ERP PROJECT NUMBERS	START	END	CALFED	Cost Share	Total Project Cost	Applicant	Principal Investigator	Quantifiable Units	Project Name	Comments
					106 A. Status of the necessary research to determine no adverse ecological/biological effects threshold concentrations for mercury in sediments and key organisms in the Bay-Delta estuary and its watershed. (Work specific to a key organism in a specific							San Francisco	intoluguoi		Mercury and Methylmercury Processes in North San Francisco Bay Tidal Wetland Ecosystems	NO CONTRACT STILL UNDER DEVELOPMENT. This project will examine mercury and methylmercury concentrations in the sediments, water and biota of five tidal marshes along a salinity gradient up the Petaluma River. The study will investigate how environmental variables affect methylmercury production and bioaccumulation, including age of marsh and salinity, and assess seasonal and interannual variation. The project will also investigate potential effects to Virginia Rail and Clapper Rail populations in these marshes. The process-oriented investigations are applicable to other watersheds.
106	SJR SJR				106 A. Status of the necessary research to determine no adverse ecological/biological effects threshold concentrations for mercury in sediments and key organisms in the Bay-Delta estuary and its watershed. (Work specific to a key organism in a specific	ERP-02D-P62	Jul-03	Jun-06	2,262,567		1,656,569 2,262,567	Bay Institute U.S. Geological Survey	Donald Yee Mark Marvin- DiPascurate		Evaluation of Mercury Transformations and Trophic Transfer in the San Francisco Bay Delta: Identifying Critical Processes for Ecosystem Restoration Program	This research project conducts investigations to understand mercury bioavailability in two different Delta locations and the processes and factors that control it, including bioaccumulation in the food chain. Understanding of processes applies to other regions as well.
106	SJR				106 A. Status of the necessary research to determine no adverse ecological/biological effects threshold concentrations for mercury in sediments and key organisms in the Bay-Delta estuary and its watershed. (Work specific to a key organism in a specific	ERP-02-P40	Jul-03	Sep 98?			546.171	University of California, Davis	DiPasquale		The Effects of Wetland Restoration on the Production of Methyl Mercury in the San Francisco Bay Delta System	This research project looks at methylmercury production and exposure in wetland environments, which are found in all regions. This project found elevated methylmercury in the water column and biota of wetlands, compared to adjacent channels. More studies are needed to determine methylation / demethylation and exposure in different types of wetlands and other habitats, to determine if there are controllable factors that can reduce methylation rates and exposure.
106	SJR				106 A. Status of the necessary research to determine no adverse ecological/biological effects threshold concentrations for mercury in sediments and key organisms in the Bay-Delta estuary and its watershed. (Work specific to a key organism in a specific	ERP-02-C06-A	Apr-03				2,668,091	Dept. of Fish and Game; San Jose State University Foundation	Mark Stephenson, Chris Thompson		Transport, Cycling and Fate of Mercury and Monomethyl Mercury in the San Francisco Delta and Tributaries - An Integrated Mass Balance Assessment Approach- Prop 204 funded	This research projects have a number of investigations to understand mercury bioavailability in different sediment environments and the processes and factors that control it.
106	SJR				106 A. Status of the necessary research to determine no adverse ecological/biological effects threshold concentrations for mercury in sediments and key organisms in the Bay-Delta estuary and its watershed. (Work specific to a key organism i a specific	ERP-02-P12-D			2,192,515		2,192,515	Stillwater	Dr. Peter Downs		Merced River Corridor Restoration Plan Phase IV: Dredger Tailings Reach	Fish and benthic invertebrates will be collected to assess mercury uptake within the local food web. <i>Jeff McLain, USFWS. Planning.</i>
106	SJR				106 A. Status of the necessary research to determine no adverse ecological/biological effects threshold concentrations for mercury in sediments and key organisms in the Bay-Delta estuary and its watershed. (Work specific to a key organism in a specific	ERP-02-C06-B			1,213,121		1,213,121	Dept. of Fish and Game; San Jose State University Foundation			Transport, Cycling and Fate of Mercury and Monomethyl Mercury in the San Francisco Delta and Tributaries - An Integrated Mass Balance Assessment Approach- Prop 13 funded	Conduct the necessary research to determine no adverse ecological / biological effects threshold concentrations for mercury in sediments and key organisms in the Bay-Delta and its watershed. This research projects have a number of investigations to understand mercury bioavailability in different sediment environments and the processes and factors that control it.

					MULT	SPECIES	CONSE	RVATION	I STRAT	TEGY MILE	STONE 10)7 ROLLE	ED UP S	SUMMARY		
Report · Deve and th · Supp · Deve · Deter · Supp	rt): elop ne Do port o elop ermin port i	diazi epari deve BMF ne the imple	107 Conduct the follow tinon and chlorpyrifos ha rtment of Pesticide Regu elopment and implement Ps for dormant spray and e ecological significance ementation of BMPs. stermine effectiveness of	izard assessme ilations. ation of a TMDL d household use of pesticide dis	nt criteria with CDFG for diazinon.	PROJECTS REVIEWED - ERP-95-M06, ERP-97-C12, ERP-97-N20, ERP-98-C06, ERP-99-B14, ERP-02-P36		chlorpyrifos haz completed to su assess and redu County. Three reduction practic been funded to developed BMP effectiveness of pyrethroids are waterbodies tes shown that very with sensory cu	ard assessme pport the device diazinon in projects have ess for both un evaluate effect various techn causing signif ted (particular low concentri es needed for	ct has been comple ent criteria for toxic relopment and impl inputs from urban s a been funded to er trban stormwater an cts of pesticides on e reductions in agrie niques. Recent reficant toxicity to be rly creeks and draii rations of organoph r salmonid migratio nroids showed sign	y. One project I intation of a TMD ormwater runoff aluate and implei d agriculture. Th aquatic life. One sulture also moniti ults from studies i thic organisms in ages). Other stu sphate pesticide . Lab studies of	L for diazinon, to n Sacramento n Sacramento ment pesticide ree projects have project that ored for ndicate that 25-60% of the dies have also s may interfere salmon with	investigation of both water pesticides, potential eff may affect significant address per drainage p the Region and other of reduce pest	Y continued disease. More ons are needed to evaluate episodes ter and sediment toxicity from including pyrethroids, as well as ffects from sublethal exposures that aquatic populations. There are efforts by other organizations to esticide issues, including the ag rogram and TMDL development at tal Board, PRIZM grants from USEPA, efforts by USDA and local groups to sticide usage and impacts from Also see milestones 33, 49, and 80.	AGENCY NOTES	NOTES CONT'D
		<u> </u>	MULTI SPECIE	S CONSER\	ATION STRATEG	Y MILESTC)NE 10	7 EVALI	JATION			DJECTS RE		ED TO FORMULATE TH	HE ROLLED UP SUMM.	ARY
MS Number	REGION	Project Type	Milestone	ERP Targets taken from ERPP Vol 2	MS Components or Questions for field personnel	ERP PROJECT	CONT START DATE		CALFED Award Cos	To Proje st Share Co	ct	Principal Investigator	Quantifiable Units	Project Name	Commer	Its
-			Conduct the following pesticide work (from Phase II Report): • Develop diazinon and chlorpyrifos hazard assessment criteria with CDFG and the Department of Pesticide Regulations. • Support development and implementation of a TMDL for		107 A. Status of the development of diazinon and chlorpyrifos hazard assessment criteria with CDFG and the Department of Pesticide Regulations.									Sustainable Cotton Project BASIC - Pesticides in San Joaquin	Task 3 of the grant is to document cha chemical release, and economic per MPs. The grant is to reduce insecti (including chlorpyrifos) and reduce sy grant appears to lead towards contribui it is not real clear. Marcia Gibbs, Con Farmers (CAFF). Implementation. I cotton growers used 50% and 65' respectively, than nearby conventic targeted pesticides include 15 activ move to a new geographic area with	nges in biodiversity, volumes c ormance as a result of BASIC cide and miticide use by 80%. Inthetic fertilizer by 50%. This ing towards the assessment bi mmunity Alliance with Family During 2000 and 2001, BASIC % less targeted pesticides, onally managed fields. These e ingredients. In 2002, BASIC the 23 growers who farm more
7	R		diazinon. • Develop BMPs for dormant spray and household uses. • Determine the ecological significance of pesticide discharges. • Support implementation of BMPs. • Monitor to determine effectiveness of BMPs								Sustainable				than 15,000 acres of cotton; growers application rates by 73% on enrolle county average; BASIC growers r application rates by 50% on all co compared to the county avera	ed acreage, compared to the educed 'targeted pesticide' otton acreage they farmed,
107	SJR		Develop BMPs for dormant spray and household uses. Determine the ecological significance of pesticide discharges. Support implementation of BMPs. Monitor to determine		107 A. Status of the development of diazinon and chlorpyrifos hazard assessment criteria with CDFG and the Department of Pesticide Regulations.	ERP-99-B14	Aug-99	Sep-04 46	0,000		Sustainable Cotton Projec	t Will Allen		Water Quality Criteria for Cloropyrifos and Diazinon	application rates by 73% on enrolle county average; BASIC growers r application rates by 50% on all co	educed 'fargeted pesticide' tton acreage they farmed, ge. Project completed. r diazinon and cloropyrifos witt ation. Project completed. DF in the Sacramento and San Jated as per Cal-Fed specs.

P		be					CONT	RACT						ele		
MS Number	REGION	Project Type		ERP Targets taken from ERPP Vol 2	MS Components or Questions for field personnel	ERP PROJECT NUMBERS	START DATE	END DATE	CALFED	Cost Share	Total Project Cost	Applicant	Principal Investigator	Quantifiable Units	Project Name	Comments
2	<u>~</u>		Milestone		personnel 107 B. Status of actions taken in support of development and implementation of a TMDL for diazinon.	NUMBERS	DATE	DATE	Award	Cost Share	Cost	Applicant Community Alliance with	investigator		Project Name Implementing Program to Reduce the Use of Pesticides and Fertilizers in the Sacramento and San Joaquin Watersheds	Comments The project objectives: 1) Plan and implement and intensive media campaign to enlist mainstream farmers in CAFF's pesticide reduction programs; 2) Continue to coordinate BIOS in San Joaquin, Madera and Colusa Communities through the 1999 growing season; 3) Oversee the transition of BIOS projects to local leadership starting in the fall of 1999; 4) Use the Lighthouse Farm Network to offer consistent technical support to farmers. Marcia Gibbs, Community Alliance with Family Farmers (CAFF). Implementation; project completed. Addresses pesticide reduction and water quality. The primary stressor addressed by the project was water quality from agricultural, non-point source contaminants and increased nutrient inputs. The project reduced the use of pesticides that have been shown to degrade water quality. Farmers that enroll in BIOS have been shown to cut by 90% their use of diazinon. The project also decreased the use of other organophosphate insecticides.
107	SJR	SR					hul 00	hur. 04	1 000 001		1 000 001	Family	ludith Dedacerd			
~					107 B. Status of actions taken in support of development and implementation of a TMDL for diazinon.	ERP-97-N20	Jul-98	Jun-01	1,680,631	none	1,680,631	Contraction	Judith Redmond		Sustainable Cotton Project BASIC - Pesticides in San Joaquin	Task 3 of the grant is to document changes in biodiversity, volumes of chemical release, and economic performance as a result of BASIC MPs. The grant is to reduce insecticide and miticide use by 80% (including chloropylfos) and reduce synthetic fertilizer by 50%. Marcia Gibbs, Community Alliance with Family Farmers (CAFF). Implementation. During 2000 and 2001, BASIC cotton growers used 50% and 65% less targeted pesticides, respectively, than nearby conventionally managed fields. In 2002, BASIC move to a new geographic area with 23 growers who farm more than 15,000 acres of cotton; growers reduced 'targeted pesticide' application rates by 73% on enrolled acreage, compared to the county average; BASIC growers reduced 'targeted pesticide' application rates by 50% on all cotton acreage they farmed, compared to the county average. Project completed.
107	SJR	SR				ERP99-B14	Aug-99	Sep-04	460,000		460,000	Sustainable Cotton Project	Will Allen			
2	2				107 C. Status of the development of BMPs for dormant spray and household uses.										Evaluation of Alternative Pesticide Use Reduction Practices	The project is designed to identify, promote, and monitor alternative practices to reduce biological impacts of pesticides on the water quality of all priority aquatic habitats identified by CALFED. <i>E-room</i> <i>final report. Research; project completed.</i>
107	SJR	ß			107 D. Status of determining	ERP-97-C12	Aug-98	Jul-01	957,781	0	957,781	UC Davis	Frank Zalom		Evaluation of Alternative Pesticide Use	The project is designed to identify, promote, and monitor alternative
107	SJR	SR			the ecological significance of pesticide discharges.	ERP-97-C12	Aug-98	Jul-01	957,781	0	957,781	UC Davis	Frank Zalom		Reduction Practices	practices to reduce biological impacts of pesticides on the water quality of all priority aquatic habitats identified by CALFED. <i>E-room</i> <i>final report. Research; project completed.</i>
107	SJR				107 D. Status of determining the ecological significance of pesticide discharges.	ERP-02-P36	Jun-03	Jun-06	1,402,159	0		University of California, Davis - Agronomy and			The Ecological and Economic Costs and Benefits of Alternative Agricultural Practices: Sediment, Nutrient, and Pesticides in Runoff from Conservation Tillage and Cover Cropped Systems	The primary goal of this project is to quantify the ecological and economic costs and benefits of alternative agricultural practices in irrigated row cropping systems, at the farm and societal levels. Project not completed. This project will determine the impacts of reduced runoffs; hopes to decrease soil organic carbon, measure sediments and pesticides, and conduct analysis of water quality. Steve Temple, UC Davis.

P		þ				CONT	RACT						ole		
MS Number	z	A-Dect 1/be lect 1/be Milestone		MC Components or						Total			Quantifiable Units		
N	REGION	jec	ERP Targets taken	MS Components or Questions for field	ERP PROJECT	START	END	CALFED		Project		Principal	anti ts		
MS	RE	O Milestone	from ERPP Vol 2		NUMBERS	DATE	DATE		Cost Share	Cost	Applicant	Investigator	Uni	Project Name	Comments
				107 E. Status of actions taken										Biological Integrated Orchard System	Biologically Integrated Orchard System (BIOS) is a three-year project
				in support of implementation of										Almond Expansion Project	providing for the transfer of information and technology regarding
				BMPs.											pollution prevention by eliminating diazinon and reducing other pesticides used in the production of California almonds.
															Demonstration Project completed. In 1998, BIOS almond growers
															managed a total of 33,820 acres, representing ~ 5% of the bearing
															and non-bearing almond acreage in California. In 1997, 17% of
															the total acreage managed by BIOS growers was managed using BIOS practices, ~ fourfold increase. In 1996, 72 participating
															almond and walnut growers participated in the BIOS program. In
															1998, the number of participants increased to 106. The number
															of BIOS growers who reported using Bacillus thuringiensis (Bt),
															increased form 33% in 1997 to 60% in 1998. Bt is a safe, selective, biological pesticide and an effective alternative to
															organophosphates. Marcia Gibbs,Community Alliance with
											Community				Family Farmers (CAFF).
											Alliance with Family				
~	≃	~									Farmers,				
107	SJR	SR			ERP-95-M06	Oct-95		660,000	0	660,000	Foundation	Jill Klein			
				107 E. Status of actions taken in support of implementation of										Evaluation of Alternative Pesticide Use Reduction Practices	The project is designed to identify, promote, and monitor alternative practices to reduce biological impacts of pesticides on the water
				BMPs.										Reduction Fractices	quality of all priority aguatic habitats identified by CALFED. <i>E-room</i>
															final report. Research; project completed.
~	~														
107	SJR	SR			ERP-97-C12	Aug-98	Jul-01	957,781	0	957,781	UC Davis	Frank Zalom			
				107 F. Status of monitoring program to determine										Biological Integrated Orchard System Almond Expansion Project	Biologically Integrated Orchard System (BIOS) is a three-year project providing for the transfer of information and technology regarding
				effectiveness of BMPs										Amond Expansion Project	pollution prevention by eliminating diazinon and reducing other
															pesticides used in the production of California almonds.
															Demonstration Project completed. In 1998, BIOS almond growers
															managed a total of 33,820 acres, representing ~ 5% of the bearing
															and non-bearing almond acreage in California. In 1997, 17% of the total acreage managed by BIOS growers was managed using
															BIOS practices, ~ fourfold increase. In 1996, 72 participating
															almond and walnut growers participated in the BIOS program. In
															1998, the number of participants increased to 106. The number
											Community				of BIOS growers who reported using Bacillus thuringiensis (Bt), increased form 33% in 1997 to 60% in 1998. Bt is a safe,
											Alliance with				selective, biological pesticide and an effective alternative to
1											Family				organophosphates. Marcia Gibbs,Community Alliance with
107	SJR	S			ERP-95-M06	Oct-95		660.000	0	660.000	Farmers, Foundation	Jill Klein			Family Farmers (CAFF).
				107 F. Status of monitoring		201.00		500,000	Ť	300,000	. sanaaton			Evaluation of Alternative Pesticide Use	The project is designed to identify, promote, and monitor alternative
				program to determine										Reduction Practices	practices to reduce biological impacts of pesticides on the water
				effectiveness of BMPs											quality of all priority aquatic habitats identified by CALFED. E-room final report. Research; project completed.
107	SJR	ж			EBD 07 010	Aug 00	1.1.01	057 704	0	057 704		Frank Zalom			mai report. Research, project compieted.
Ę	Ś	S S S S S S S S S S S S S S S S S S S		1	ERP-97-C12	Aug-98	Jul-01	957,781	U	957,781	UC Davis	FIGHK ZOUM		1	

				MULTI	SPECIES	CONSE	ERVAT	ION ST	RATEG	Y MILES	STONE 1	08 ROLLE	D UP	SUMMARY		
Conc goals severa · Evalu discha · Expa Phase · Coor Valley draina Phase · Supp	duct s of sou al sce uate a arges and ar e II Re dinate Drain ge pr e II Re oort de	e with other programs; e. age Implementation Prog oblems that are not subje	ata gaps in order mine bioavailabil port). nent real-time ma rol, treatment, an g., recommendati gram, CVPIA for ct to correction in ntation of TMDL f	to refine regulatory lity of selenium under anagement of selenium ad reuse programs (from ons of San Joaquin retirement of lands with a other ways (from	PROJECTS REVIEWED - ERP-98-B07, ERP-98-B14, ERP-00-E02, ERP-02-P35, ERP-02-P44		water, run San Joaqu have been ecological have been technologi watershed developme ERP has p coordinatic coordinate SJR. See	off and groun in Valley and i funded to ev- effects of sel i funded to de- ies to reduce i. Two additio ent and opera- provided gran on of agriculti. with the RW other milestc at a landscap	dwater input d from refiner valuate source enium in the evelop treatm selenium an nal projects ation of a rea t funds direce ural drainage 'QCB on TM ones (34 and	ts from natura ries in the Sai ces, fate and 1 de aquatic ecos nent feasibility dd salinity inpu were funded al-time water of ctty to SJVDIP e issues in the DL issues for d 108) for addi	n Francisco Bay transport, bioacd system. Three c / studies and tre tis in the San Jo to support the p quality managen (BCP process) e SJR. ERP and salinity (affects itional projects t	il selenium in the y. Two projects cumulation and of these projects eatment baquin River lanning, ment program. The b to improve			AGENCY NOTES	NOTES CONT'D
		MULTI SPECI		ATION STRATEG	Y MILESTC	DNE 10	8 EV	ALUATI	ON OF			OJECTS RE	VIEW	ED TO FORMULATE T		IARY
MS Number	REGION	e Milestone	ERP Targets taken from ERPP Vol 2	personnel	ERP PROJECT NUMBERS	CON1 START DATE	END DATE	CALFED Award	Cost Share	Total Project e Cost	Applicant	Principal Investigator	Quantifiable Units	Project Name	Comm	
		 Conduct the selenium research to fill de dagaps in order to refine regulatory goe of source control actions; determine bioavailability of selenium under sew scenarios (from Phase II Report). Evaluate and, if appropriate, implement real-time management of selenium discharges (from Phase II Report). Expand and implement source cont reatment, and reuse programs (from Phase II Report). Cordinate with other programs; e.grecommendations of San Joaquin Valley Drainage Implement to a subject to correction in other ways (from Phase II Report). Support development and implementation Program, LVPIA for refirement of lam with drainage problements that are not subject to correction in other ways (from Phase II Report). Support development and implementation of TMDL for selenium in the San Joaquin Ruver watershed (focus on Grassland area). 	is is rol I ds	108 A. Status of selenium research to fill data gaps in order to refine regulatory goals of source control actions; determine bioavailability of selenium under several scenarios (from Phase II Report).										Assessment of the Impacts of Selenium on Restoration of the San Francisco Bay-Delta Ecosystem	PORTION OF MILESTONE ADDRE and use models and monitorir controversies that might impede the Samuel Luoma, U.S. Geological Project con	ng to aid management of Se ecosystem restoration process. <i>Survey. Monitoring/Research.</i>
108	SJR	ж,			ERP-98-B07	Aug-98	Dec-01	1,589,000	0	1,589,000	U.S. Geological Survey	Samuel Luoma				

—		1														
							CONT	RACT								
MS Number		Project Type												Quantifiable Units		
E S	REGION	сŢ			MS Components or						Total			tifia		
Ž	ē	oje		ERP Targets taken	Questions for field	ERP PROJECT	START	END	CALFED		Project		Principal	ian		
Ň	RE	Å	Milestone	from ERPP Vol 2	personnel	NUMBERS	DATE	DATE	Award	Cost Share	Cost	Applicant	Investigator	g P	Project Name	Comments
					108 A. Status of selenium										Irrigation Drainage Water Treatment	The project will provide the studies needed to improve and optimize
					research to fill data gaps in										for Selenium Removal: Panoche	selenium removal at the lowest possible cost. With the wide-spread
					order to refine regulatory goals										Drainage District Demonstration	implementation of the Algal-Bacterial Selenium Removal (ABSR)
					of source control actions; determine bioavailability of										Facility	technology in the western San Joaquin Valley, the loading of selenium to the San Joaquin River and the Delta would be substantially reduced
					selenium under several											lowering the potential for toxic impacts upon wildlife. <i>Tryg J.</i>
					scenarios (from Phase II											Lundquist, UC Berkeley. Implementation project completed.
					Report).											Demonstration project for the treatment of wastewater to reduce
																selenium and nitrogen. The pilot project was a successful scale
																up of a laboratory conceptual model for reducing selenium and
																nitrogen found in agricultural drainage water. It continues to function and provide further research information in regards to
																treatment of agricultural drainage water.
																a callent of agricultural aramage water.
	SJR	ЯS					0	0	4 4 4 0 0 0 0	News	4 4 40 000					
	S	S			108 A. Status of selenium	ERP-98-B14	Sep-98	Sep-02	1,149,000	None	1,149,000	UC Berkeley	William J. Oswald		Selenium Effects on Health and	This project will conduct research relating to the bioavailability of
					research to fill data gaps in										Reproduction of White Sturgeon,	selenium in the Delta and Bay and San Joaquin River. Research
					order to refine regulatory goals										Acipenser transmontanus, in the	project not complete, has received an extension. Serge
					of source control actions;										Sacramento-San Joaquin Estuary	Doroshov, UC Davis.
					determine bioavailability of											
					selenium under several							The Regents of				
	с				scenarios (from Phase II Report).							the University	Ahmad Hakim-			
	SJR	SR			. ,	ERP-02-P35	Jul-03	Jun-04	150,047		150,047	of California	Elahi			
					108 B. Status of the											
					evaluation and, if appropriate, implementation a of real-time											
					management of selenium											
					discharges (from Phase II											
108	SJR	ЯS			Report).											
7	Ś	S			108 D. Status of expansion										Irrigation Drainage Water Treatment	The project will provide the studies needed to improve and optimize
					and implementation of										for Selenium Removal: Panoche	selenium removal at the lowest possible cost. With the wide-spread
					selenium source control,										Drainage District Demonstration	implementation of the Algal-Bacterial Selenium Removal (ABSR)
					treatment, and reuse programs										Facility	technology in the western San Joaquin Valley, the loading of selenium
					(from Phase II Report).											to the San Joaquin River and the Delta would be substantially reduced
																lowering the potential for toxic impacts upon wildlife. Tryg J.
																Lundquist,UC Berkeley. Implementation project completed. Demonstration project for the treatment of wastewater to reduce
																selenium and nitrogen. The pilot project was a successful scale
																up of a laboratory conceptual model for reducing selenium and
																nitrogen found in agricultural drainage water. It continues to
																function and provide further research information in regards to
																treatment of agricultural drainage water.
	~															
	SJR	SR				ERP-98-B14	Sep-98	Sep-02	1,149,000	0	1,149.000	UC Berkelev	William J. Oswald			
				Ì	108 D. Status of expansion				, ,,,,,,,		, ,,,,,,,				Panoche/Silver Creek Watershed	This project will involve detailed technical evaluations of BMPs
					and implementation of										Management and Action Plan	recommended in the Panoche/Silver Creek Watershed Assessment for
					selenium source control,											managing erosion and reducing sediment and other contaminants
					treatment, and reuse programs (from Phase II Report).							Westside				delivered from the upper watershed during high flow events. This project will perform technical analysis on selenium
					(nominado in Nepult).							Resource				sources. <i>Implementation project is 80% completed. Sarge Green,</i>
108	SJR	~										Conservation				Westside RCD.
10	Ś	SR			l	ERP-00-E02	Feb-01	Sep-04	868,600		868,600	District	Nettie Drake		l	

r		ed					CONT	RACT						ē	
MS Number	REGION	Project Type		ERP Targets taken	MS Components or Questions for field	ERP PROJECT	START	END	CALFED		Total Project		Principal	en D Project Name	
Ň	RE	Pr	Milestone	from ERPP Vol 2	personnel	NUMBERS	DATE	DATE	Award	Cost Share	Cost	Applicant	Investigator		Comments
					108 D. Status of expansion									Full Scale Demonstration of	The overall goal of this three-phased project is to demonstrate the
					and implementation of selenium source control,									Agricultural Water Recycling Process Using Membrane Technology	technical and economic feasibility of operating a zero-discharge on
					treatment, and reuse programs									Using Membrane Technology	farm drainage water recycling process in an environmentally sound manner. The treatment technology tested during this phase of the
					(from Phase II Report).										project will support the reduction of selenium, boron, and other
					(constituents of concern in drainage water that otherwise flows into the
															SJR in this Region. Research project not completed. Ronald
															Enzweiler, Water Tech Partners.
	SJR	~										Water Tech			
	S	SR				ERP-02-P44	Jul-03	Jun-04	280,890		280,890	Partners	Ronald Enzweiler		
					108 E Status of coordination										
					with other selenium programs; e.g., recommendations of San										
					Joaquin Valley Drainage										
					Implementation Program,										
					CVPIA for retirement of lands										
					with drainage problems that										
					are not subject to correction in										
					other ways (from Phase II										
	₩				Report).										
108	SJR	SR													
					108 F Status of actions to										
					support development and implementation of TMDL for										
					selenium in the San Joaquin										
_	~				River watershed (focus on										
108	SJR	SR			Grassland area).										

				MU	JLTI SPECIES	CONSI	ERVAT	ION STR	RATEG	Y MILES	TONE 10	9 ROLLE	D UP	SUMMARY			
follow organ stream · Part USDA · Impl BMPs speci · Impl urban and d	ving a nochle ms (f icipa A sec leme s on a fic sit leme n/indu lischa	action orine rom te in limen nt se agric tes nt BN ustria arges	109 Conduct the hs in reduce e pesticide inputs to Phase II Report): implementation of ht reduction program. ediment reduction cultural lands and other MPs for al storm water runoff is to reduce PCB and e pesticides.		PROJECTS REVIEWED - ERP-95-M06, ERP-97-N20, ERP-02-P36		However, t Therefore, organochlo projects mo manageme the listed p	they are extreme efforts to redu- prine pesticide ost likely to affect the projects to this	mely persist uce sedimen s. Since org fect this mile hat control n milestone is	ent and tend to at inputs will als panochlorine pe estone are thos unoff and sedir s indirect for the	e that advocate ment. The contril	the sediment. of onger in use the and apply bution of some of milestones 35, 51			AGENCY NOTES	NOTES CONT'D	
	1		MULTI SPECIE	S CONSERVATION STRAT		ONE 10)9 EV	ALUATI	ON OF		UAL PRO	JECTS RE	VIEW	ED TO FORMULATE T	HE ROLLED UP SUMM	ARY	
MS Number	REGION	Project Type	Milestone	MS Components ERP Targets taken from ERPP Vol 2 personnel		CON START DATE	END DATE	CALFED Award	Cost Share	Total Project Cost	Applicant	Principal Investigator	Quantifiable Units	Project Name	Comm	ints	
109	SJR		Conduct the following actions in reduce organochlorine pesticide inputs to streams (from Phase II Report): • Participate in implementation of USDA sediment reduction program. • Implement sediment reduction BMPs on agricultural lands and other specific sites. • Implement BMPs for urban/industrial storm water runoff and discharges to reduce PCB and organochlorine pesticides.	109 A. Status of particip in the implementation of sediment reduction prog behalf of reducing organochlorine pesticide inputs to streams.	USDA Iram in	Jul-98	Jun-01	1,680,631	0	1,680,631	Community Alliance with Family Farmers	Judith Redmond		Implementing Program to Reduce the Use of Pesticides and Fertilizers in the Sacramento and San Joaquin Watersheds	The project objectives: 1) Plan and campaign to enlist mainstream farme programs; 2) Continue to coordinat and Colusa Communities through Oversee the transition of BIOS proje the fall of 1999; 4) Use the Light consistent technical support to farme Alliance with Family Farmers (CA completed. Addresses pesticide The primary stressor addressed by from agricultural, non-point source nutrient inputs. The project reduc have been shown to degrade water BIOS have been shown to cut by 9 project also decreased the use insectici	rs in CAFF's pesticide reduction BIOS in San Joaquin, Madera the 1999 growing season; 3) cts to local leadership starting in nouse Farm Network to offer rs. Marcia Gibbs, Community FF). Implementation; project reduction and water quality. the project was water quality a contaminants and increased ed the use of pesticides that quality. Farmers that enroll in 0% their use of diazinon. The of other organophosphate	
109	SJR	SR		109 B. Status of the implementation of sedin reduction BMPs on agri lands and other specific to reduce organochlorin pesticides	nent cultural sites	Jul-90	Jun-01	1.680.631	0	1.680,631	Community Alliance with Family Farmers	Judith Redmond		Implementing Program to Reduce the Use of Pesticides and Fertilizers in the Sacramento and San Joaquin Watersheds	The project objectives: 1) Plan and implement and intensive media campaign to enlist mainstream farmers in CAFF's pesticide reductio programs; 2) Continue to coordinate BIOS in San Joaquin, Madera and Colusa Communities through the 1999 growing season; 3) Oversee the transition of BIOS projects to local leadership starting i the fall of 1999; 4) Use the Lighthouse Farm Network to offer consistent technical support to farmers. <i>Marcia Gibbs, Communi Alliance with Family Farmers (CAFF)</i> . Implementation; projec completed. Addresses pesticide reduction and water quality. The primary stressor addressed by the project was water qualit from agricultural, non-point source contaminants and increase nutrient inputs. The project reduced the use of pesticides that have been shown to degrade water quality. Farmers that enroll BIOS have been shown to cut by 90% their use of diazinon. Th project also decreased the use of other organophosphate insecticides.		

		96					CONT	RACT						e		
MS Number	REGION	Project Type	Milestone	ERP Targets taken from ERPP Vol 2	MS Components or Questions for field personnel	ERP PROJECT NUMBERS	START DATE	END DATE	CALFED Award	Cost Share	Total Project Cost	Applicant	Principal Investigator	Quantifiable Units	Project Name	Comments
					109 B. Status of the implementation of sediment reduction BMPs on agricultural lands and other specific sites to reduce organochlorine pesticides										Biological Integrated Orchard System Almond Expansion Project	Biologically Integrated Orchard System (BIOS) is a three-year project providing for the transfer of information and technology regarding pollution prevention by eliminating diazinon and reducing other pesticides used in the production of California almonds. Project completed. Marcia Gibbs, Community Alliance with Family Farmers, Foundation. Implementation/demonstration. In 1998, BIOS almond growers managed a total of 33,820 acres, representing ~ 5% of the bearing and non-bearing almond acreage in California. In 1997, 17% of the total acreage managed by BIOS growers was managed using BIOS practices, ~ fourfold increase. In 1996, 72 participating almond and walnut growers participated in the BIOS program. In 1998, the number of participants increased to 106. The number of BIOS growers who reported using Bacillus thuringiensis (Bt), increased form 33% in 1997 to 60% in 1998. Bt is a safe, selective, biological pesticide and an effective alternative to organophosphates.
109	SJR	SR				ERP-95-M06	Oct-95		660.000	0	660.000	Community Alliance with Family Farmers, Foundation	Jill Klein			
109	SJR	SR			109 B. Status of the implementation of sediment reduction BMPs on agricultural lands and other specific sites to reduce organochlorine pesticides	ERP-02-P36	Jun-03	Jun-06	1,402,159	0		University of California, Davis - Agronomy and			The Ecological and Economic Costs and Benefits of Alternative Agricultural Practices: Sediment, Nutrient, and Pesticides in Runoff from Conservation Tillage and Cover Cropped Systems	The primary goal of this project is to quantify the ecological and economic costs and benefits of alternative agricultural practices in irrigated row cropping systems, at the farm and societal levels. Project not completed. This project will determine the impacts of reduced runoffs; hopes to decrease soil organic carbon, measure sediments and pesticides, and conduct analysis of water quality. Steve Temple, UC Davis.
109	SJR	SR			109 C.Status of Implementing BMPs for urban/industrial storm water runoff and discharges to reduce PCB and organochlorine pesticides.											

					MULTI	SPECIES	CONSE	RVAT	ION ST	RATEG	BY MILE	STONE 1	10 ROLL	ED U	P SUMMARY		
Rep · De · De · Ev · Pa · Pa wate · Pa	IILESTONE 110 Conduct the following trace metals work (from Phase II Report): Determine spatial and temporal extent of metal pollution. Determine ecological significance and extent of copper contamination. Evaluate impacts of other metals such as cadmium, zinc, and chromium. Participate in Brake Pad Partnership to reduce introduction of copper. Partner with municipalities on evaluation and implementation of storm vater control facilities. Participate in remediation of mine sites as part of local watershed estoration and Delta restoration.				PROJECTS REVIEWED -		milestone i addressed the develo bay area b report http:	JMMARY No projects have been funded by CBDA to support this estone in the San Joaquin River Region. However, this issue is being dressed by monitoring performed by the SF Bay Regional Monitoring Program, e development of TMDLs for metals, and the stormwater runoff program in the y area by the SF Bay Regional Water Quality Control Board. (See latest RMP port http://www.sfei.org/rmp/pulse/POE2004.pdf). See milestones 36, 52 and for additional projects that address this milestone at a landscape level.								NOTES CONT'D	
			MULTI SPECIE		ATION STRATEG	Y MILESTO	DNE 11	0 EV	ALUAT	ION OF	INDIVI	DUAL PR	OJECTS R	EVIE	WED TO FORMULATE	THE ROLLED UP SUM	MARY
MS Number	REGION	Project Type	Milestone	ERP Targets taken from ERPP Vol 2		ERP PROJECT NUMBERS	CONT START DATE	END DATE	CALFED	Cost Share	Total Project Cost	Applicant	Principal Investigator	Quantifiable Units	Project Name	Comme	nts
110	SJR	SR	Conduct the following trace metals work (from Phase II Report): • Determine spatial and temporal extent of metal pollution. • Determine ecological significance and extent of copper contamination. • Evaluate impacts of other metals such as cadmium, zinc, and chromium. • Participate in Brake Pad Partnership to reduce introduction of copper. • Partner with municipalities on evaluation and implementation of storm water control facilities. • Participate in remediation of mine sites as part of local watershed restoration and		110 A. Status of determining spatial and temporal extent of trace metal pollution.												
110	SJR	SR			110 B. Status of determining ecological significance and extent of copper contamination.												
110	SJR	SR			110 C. Status of evaluating impacts of other metals such as cadmium, zinc, and chromium												
110	SJR	SR			110 D. Status of participation in Brake Pad Partnership to reduce introduction of copper.												
110	SJR	SR			110 E. Status of partnerships with municipalities on evaluation and implementation of storm water control facilities.												

			110 F. Participate in					
			remediation of mine sites as					
			part of local watershed restoration and Delta					
•	≌	~	restoration and Delta					
11	S	R. S.	restoration.					

				MULTI	SPECIES	CONSE	ERVAT	ION ST	RATEG	Y MILES	TONE 11	1 ROLLE	D UP S	UMMARY		
MILESTONE 111 Conduct the following unknown toxicity work (from Phase II Report): • Conduct appropriate studies to identify unknown toxicity, and develop management actions as appropriate.				PROJECTS REVIEWED -		contract There a	s that add	dress this tracts func	milestone	ion) summa at a landsca ^{>} that are sp				AGENCY NOTES	NOTES CONT'D	
		MULTI SPECIE	S CONSERV	ATION STRATEG	Y MILESTO	ONE 11	1 EV	ALUAT	ION OF	INDIVID	UAL PRC	JECTS RE	VIEWEI	D TO FORMULATE T	HE ROLLED UP SUMI	MARY
MS Number REGION	Project Type	Milestone	ERP Targets taken from ERPP Vol 2	MS Components or Questions for field personnel	ERP PROJECT NUMBERS	CONT START DATE	RACT END DATE	CALFED Award	Cost Share	Total Project Cost	Applicant	Principal Investigator	Quantifiable Units	Project Name	Comr	nents
111 I 13		Conduct the following unknown toxicity work (from Phase II Report): · Conduct appropriate studies to identify unknown toxicity, and develop management actions as appropriate.		111 A. Status on conducting appropriate studies to identify unknown toxicity												
				111 A. Status on conducting appropriate studies to identify unknown toxicity												
111 SJR	SR			111 A. Status on conducting appropriate studies to identify unknown toxicity												